REMARKS

Applicant respectfully requests reconsideration of the subject application as amended. In response to the Office Action mailed 11/15/05, Applicant is filing this amendment. Claims 1, 2, 4, 5, 10-12, 14, 15, 18, 23-25 and 27 are still pending.

In the Office Action mailed 11/15/05, the Examiner has rejected the pending claims under 35 U.S.C. §103(a) as being unpatentable over various combinations of Riordan et al (U.S. Patent 5,027,270; Riordan), Eisen et al. (U.S. Patent 5,897,654; Eisen) and Merchant et al. (U.S. Patent 6,665,792; Merchant). Applicant submits that none of the relied upon references teach the claimed embodiments of the invention as now amended. Furthermore, the patent number (5,897,651) noted by the Examiner in the office action as that of Eisen is incorrect. Eisen is patent number 5,897,654.

Riordan discloses a processor controlled interface between a processor, instruction cache and main memory. Applicant submits that the tag in the TAG field of Riorden pertains to generally known use of tags associated with cache lines stored in a cache. That is, the tag is used to determine if a cache line is stored in the cache and if the TAG field does not match, the referenced instruction is not stored in the cache and a cache miss occurs (Riorden at col. 3, lines 21-30). In the event of a cache miss, the main memory address generated by the processor is transferred to the memory interface and the processor enters a stall mode to halt instruction processing (see for example, Riordan at col. 3, lines 31-38).

The embodiments of the present invention, as now recited in the amended independent claims, recite the detection of a replay of an instruction in a load/store pipeline due to a load miss. The stall state is then applied due to the detection of the replay. As noted in the amended claims, a destination register value is coupled to the queue to obtain the fill tag corresponding to the destination register associated with the load miss. This fill tag is then placed in a miss tag register. When the tag in the miss tag register and a fill tag of a returning fill data results in a match, the pipeline exits the stall state. Applicant submits Riordan, Eisen and Merchant, singly or combined, fail to disclose these aspects of the claimed embodiments of the invention.

Accordingly, Applicant submits that Riordan, Eisen and Merchant, singly or combined, fail to disclose the embodiments of the invention as now recited in the amended claims.

Accordingly, Applicant respectfully requests the Examiner to withdraw the 35 U.S.C. §103(a) rejection and allow pending claims 1, 2, 4, 5, 10-12, 14, 15, 18, 23-25 and 27, as amended.

If there are any fee shortages related to this response, please charge such fee shortages to Deposit Account No. 50-2126.

Respectfully submitted,

GARLICK, HARRISON & MARKISON, LLP
(Customer No. 34,399)

Date: 2 - 15-2006   By: _William W. Kidd_

William W. Kidd
Reg. No. 31,772
Phone: (512) 263-1842
Fax No: (512) 263-1469
Email:wkidd@texaspatents.com